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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,070	12/13/2000	George C. Crane	CAP-2	7720

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EXAMINER

KESACK, DANIEL

ART UNIT

PAPER NUMBER

3691

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/736,070	<b>Applicant(s)</b> CRANE, GEORGE C.	
	<b>Examiner</b> Dan Kesack	<b>Art Unit</b> 3691	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 60 and 61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-59 and 62-73 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Amendment filed 11/02/2006 has been entered and fully considered. Claims 1-73 are currently pending. Claims 60 and 61 have been withdrawn from consideration.

### ***Election/Restrictions***

2. This application contains claims directed to the following patentably distinct species: Claims 15, 16, 31, 32, 44, 45, 50, 51, 54, 55, 58, 59, directed towards a financial system, claims 62, 64, 66, 68, 70, 72, directed towards a biological system, and claims 63, 65, 67, 69, 71, and 73 directed towards a meteorological system. The species are independent or distinct because the systems and the corresponding data are of divergent subject matters. As such, the scope of the claims from which the species claims depend, would change depending on the subject matter.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 22, 35, 49, 52 and 56 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

Art Unit: 3691

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

***Requirement for Information Under 37 CFR 1.105***

3. Rule 1.105 allows the Examiner, in the course of examining or treating a matter in a pending application, to require the submission from Applicant and his assignees of information as may be reasonably necessary to properly examine or treat the matter. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide information that the examiner has determined is reasonably necessary to the examination of this application. This information generally relates to background information of mathematical concepts of the claimed invention.

**Interrogatories**

Please provide answers to each of the following interrogatories eliciting factual information regarding the concepts of the present invention.

- a. Is the Applicant aware of any application of Brownian Motion, in any field or regarding any subject matter, wherein a first range of data is compared to an expected range of data, wherein the expectation is based on Brownian Motion, which was known before the filing of the present application? If so, what are they?

- b. Is Applicant aware of any application of Brownian Motion in the field of financial market assessment, before the filing of the present application? If so, what are they?
- c. To the applicant's knowledge, has Brownian Motion been used to classify the variance in data of any system, before the filing of the present application? If so, how, and in what fields?
- d. To the applicant's knowledge, was it known at the time of the Applicant's invention that in a system, if a measured range of data is equal to a the range of data expected according to Brownian principal then the system is erratic, unstable, or unpredictable?
- e. To the applicant's knowledge, was it known at the time of the Applicant's invention that in a system, if a measured range of data exceeds the range of data expected according to Brownian principal then the system is trending, accelerating, or growing?
- f. To the applicant's knowledge, was it known at the time of the Applicant's invention that in a system, if a measured range of data is less than the range of data expected according to Brownian principal then the system is congesting, decelerating, or shrinking?

- g. To the applicant's knowledge, was it known at the time of the Applicant's invention that in a system, data which changes at a rate different from
- h. Did applicant independently derive the conclusions of the difference in measured data and data expected based on Brownian motion, such as erratic, trending, or congesting variance, without any prior knowledge of such relationships? If not, what was known at the time of the Applicant's invention about said relationships?
- i. Does Applicant have knowledge of the term Hurst Exponent? If so, what relation, if any, does it have to Applicant's invention?

***General Information Regarding Applicants' Response***

The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete reply to the requirement for that item.

**Conclusion**

4. The requirement under 37 CFR 1.105 is subject to the provisions of 37 CFR 1.134, 1.135 and 1.136 and has a shortened statutory period of 2 months.

EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Kesack whose telephone number is 571-272-5882.

The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
HANI M. KAZIMI  
PRIMARY EXAMINER